

USOE 2005 Summative Evaluation Report

Educational Technology Grants Partnerships

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At the request of the Utah State Office of Education (USOE), representatives from the University of Utah's Department of Teaching and Learning collected and analyzed evaluations from a series of programs affiliated with the USOE's technology grants. The U.S. Department of Education provided funds to states to support technology in rural and poor school districts under a program entitled Enhancing Education through Technology (EETT). This program provided funding from the No Child Left Behind (NCLB) Act of 2001 for educational technology used in classrooms to improve student academic achievement for two year grants from July 1, 2003 through June 30, 2005, and again from July 1, 2005 through June 30, 2007. Funds were distributed through formula and competitive grants in Utah by the Utah State Office of Education based on percentages of high poverty, low performing schools, plus the promise of professional development for teachers, principals, administrators and library media personnel to further the effective use of technology in the classroom and library media center or increase access to technology for students in high-poverty and high-need schools. This document reviews the evaluations of the first two-year grant projects, as well as for the first year of the second iteration of two-year grant projects, and presents information that analyzes the data across the grants, including recommendations for improving the grant supervisors' data collection procedures and analyses.

Individual Narratives

Narrative summaries of each participating grant recipient, including an overview of its goals, plan of activities, and data summaries are provided. The districts and a brief summary of their proposed grants are:

CyberCorps Grant (Iron. Washington. Kane. Garfield. Beaver. Millard. San Juan. Grand. Piute. Rich. South Sanpete. North Sanpete. Granite. and Wayne School Districts):

CyberCorps was set up to provide teachers and students with knowledge, skills and assistance in using technology for professional and teaching activities, and using research based staff development to support a project-based learning environment. Further, it was designed to promote students' skills in offering technical support and to assist districts in implementing their own five-year technology plans.

Overview. This project was designed to create project-based learning environments by integrating technology throughout the participating schools in this district. The project received a grant of \$233,000 to set up a CyberCorps program in several school district high schools, as well as servicing those schools in the districts' feeder middle, intermediate, and elementary schools. The students involved in CyberCorps were intended to be supervised by a certified teacher who received technology training along with their CyberCorps students and were responsible (both in their high schools as well as in their feeder schools) for providing a variety of technology training and support for teachers seeking to integrate technology into the curriculum.

Project Goals. 1) to provide teachers and students with just-in-time technology support through an increased awareness of the technology tools available for successfully integration within project-based learning environments; 2) to provide research-based staff

development activities for school technology specialists and CyberCorps students, thereby increasing their abilities to support technology integration across the state's core curriculum; 3) to develop a sustainable, reliable and local technical support program for the CyberCorps schools and their feeder schools; 4) to render assistance to the districts in meeting the goals and objectives of their five-year plans. In order to evaluate the achievement of these goals, several survey instruments targeting stakeholders at all levels of the grants implementation were developed with the assistance of the evaluation team. At the time of this writing, these data were still being gathered.

R2R eCampus Grant (Beaver, Iron, Kane, and Washington School Districts):

In their original grant proposal, these four districts in Southern Utah proposed to partner with the Southwest Educational Development Center, Mid-continental Research Education Laboratory, and Southern Utah University in an effort to increase students' writing skills through staff development and the addition of technology resources. These methods included creating a three to one computer to student ratio in classrooms, the purchase of LCD projectors, and the use of Marzano's Classroom Instruction that Works professional development model. Additional stated goals included consideration of school-wide reform as opposed to isolated incidences of personal change, an increased percentage of students achieving proficiency on UP ASS And CRT competency tests, and increases in teachers' "technology integration" and use of "research based instructional strategy".

However, this grant was significantly modified after its administrator learned that it had only been granted a portion of the requested funding and its scope limited to approximately three schools selected from within the original districts. The evaluation

team's efforts to obtain revised goal statements or hard data on the scope of the new project have been unsuccessful; however, the evaluation team has been reassured that those involved continue to gather data. The evaluation team also assisted the grant administrator in the creation of survey instruments for this purpose during the evaluation period.

Central Utah Educational Services/UTIPS Integration Grant (Juab. North Sanpete, Piute. Sevier. South Sanpete. Tintic, and Wayne School Districts):

With the assistance of Central Utah Educational Services, these seven school districts proposed to expose their administration to increased training in the use of technology and its manifold expressions to better equip them to deal with the requirements of NCLB. To this end, three principle goals were identified in the original grant proposal: to improve student achievement with the use of technology, to assist a diverse body of students in becoming technologically literate, and to encourage "effective integration of technology resources and systems with professional development and curriculum enhancement to promote research-based instructional methods that can be widely replicated." Schools were to receive technical support and programming expertise in using and altering the UTIPS (Utah Testing Item Pool) software and interface from the Southeast Educational Service Center and the Richfield Campus of Snow College. Administrators at all schools were also to receive special Walk'bout software training provided by an outside consultant as well as the opportunity to attend additional district-sponsored professional development, especially in the context of Marzano's Data-Driven-Decision-Making precepts.

As was the case with the other grants treated by this document, the evaluation team did not receive data on the project that might have allowed them to honor their responsibilities in a timely fashion. We are again assured that data collection is *en process*, both by the grant administrator and by an additional external evaluator hired by the grantees for this purpose.

Evaluation and Data Measurements

One of the tasks before the evaluation team has been to work collaboratively with each sub-grant community to develop a plan of action for gathering, analyzing, and disseminating data. The evaluation team met with grant administrators from June, 2004 through June, 2005 and communicated through a variety of media. The communication with the teams included prompts for reporting status, the provision of assistance creating an implementing useful data collection tools and online surveys, and offering assistance with the analysis of those data.

However, the evaluation team's repeated attempts to gather information that would allow assessment of the purpose and scope of grants were largely unsuccessful. Contact with grant administrators in nearly all situations was logistically difficult, and at the time of this writing, the team had yet to receive data from any of the grantees. It is our opinion that such circumstances might have been anticipated, based both our previous experience evaluating EETT grants in the same state and upon additional research, discussed below, which was undertaken by the evaluation team as a result of these failed efforts.

Introduction - Additional research and information

In an age of accountability, stakeholders at all levels must respond to the charges and needs from their constituents. Fiscal agents, national and state offices of education, school boards, administrators, teachers, and most importantly students and families, expect to see outcomes that align with claims for "success." At a minimum, stakeholders hope to see lines of evidence that adequately align goals with outcomes in substantive ways. When "success" is not an outcome, analysts must be able to formulate clear discussions of their findings and construct plans for future decision making.

The path to substantive changes within institutions is complex and requires more than data gathering and analysis. For granting agencies and grant recipients, the process of goal setting, data gathering and program evaluation requires education, ongoing and recursive analysis, and an understanding of the relationship between activities at the micro level and the broader goals within agencies and communities.

The following discussion is drawn from a research study that sought to investigate EETT grants and projects throughout the United States, and ultimately presents the experiences of 11 educational technology directors and four evaluators of state-wide implementations. These data illustrate both a local and national need for support to continue the implementation of grants as well as their long-term sustainability, and provide a framework within which to consider the nature of block grant funding. Because of its unique applicability to the issues raised by efforts in the context of the EETT evaluations, we present the following information.

Increasingly, states are being charged with the task of integrating technology in ways that provide a wide range of students with an opportunity to advance academically and improve the process of teaching and learning. In 2003, the U.S. Department of Education

provided funding to states to support technology in rural and poor school districts under a program entitled Enhancing Education through Technology (EETT) from the No Child Left Behind (NCLB) Act. Funds have been distributed through formula and competitive grants in one western state based on percentages of high poverty, low performing schools, and the promise of professional development for teachers, principals, administrators and library media personnel to further the effective use of technology in the classroom and library media center or to increase technology access for students in high-poverty and high-need schools. As stated previously, researchers were invited to assist the grantees in their efforts to develop and carry out a substantive evaluation project to align their goals for their projects with data gathering and analysis. The challenges identified led to a two-phased study that describes one western state's efforts to support and gather data on the projects of the grant recipients. A comparison of similar projects across the US was investigated to identify the challenges of block grant implementation.

Context of the Study

Researchers were invited to provide information to assist four teams of grantees from a western state in their efforts to gather data, match goals with data collection, and analyze these data. Four projects were funded for the two-year cycle. The projects included offering direct support for teachers, enhancing student skills through technology, mentoring new teachers using technology professional development, and providing direct collaboration to improve the integration of technology into the classroom.

Each project was examined as its own case, and a cross case analysis was completed on the similarities and differences of each of the grant projects, in order to identify common themes and challenges as well as each program's unique qualities. All of the grants had a goal to improve student learning and outcomes, however, the approaches varied from direct interactions with the

learners to providing support for educators and modeling/mentoring of new teachers. Each grant selected different data to collect and then compiled those data in a variety of ways. The research question with which we initially attempted to examine these data was:

- I. In what ways have these grants impacted the use of educational technology or student outcomes in the rural school districts involved in these grants?

The challenges that each grant investigator identified were substantial and included aligning goals with data collection, implementing the project plans, and systematically analyzing data. The researchers realized that the grant facilitators' evaluation tasks were enormous and far more complex than recognized by the state. This dilemma led to Phase II of this study and the following research questions:

2. What specific challenges do grant investigators identify in implementing and evaluating their grants?
3. What recommendations do grant investigators have for state granting agencies, school districts, and future investigators in implementing grants for technology integration in rural settings?
4. What do other state directors of educational technology report in similar circumstances of implementing grants?

Theoretical Framework

For more than a decade, educators and policy makers have argued for the integration of technology as a mechanism for improving the educational experiences of groups of students who may lack the physical access to resources and services (Wang, Johnson, & Pisapia, 1994). Mandates from No Child Left Behind have heightened the need for resources and services even

further (Cullen, Frey, Hinshaw, & Warren, 2004; Reeves, 2003). This is particularly true for those in rural communities and those students identified as at-risk (Jensen, 1998; Lunenburg & Irby, 1998; Pittman, 1998).

Educators and others involved in technology integration often assume that the use of technology provides students and teachers with the resources to access learning in ways they would not have considered in the past (Archer, 2000; Coppola, 2004; Roblyer & Knezek, 2003). However the integration of technology but itself is insufficient. That is, those working most closely with students need ongoing support and guided training on a consistent basis in order to implement technology in meaningful ways (Cullen, Frey, Hinshaw, & Warren, 2005). We argue that in addition to technical and administrative support for teachers, those overseeing projects at district and state levels must be held accountable for evaluating the realization of their projects' goals in substantive ways.

Cullen, et al. (2005) argued for formative and summative evaluation in which teachers in classrooms ascertain the degree to which project goals are met. What is missing, however, is the guided facilitation by those overseeing projects in helping teachers in classrooms to meet their goals. Our data report that those directing projects are unable to match their project goals and projected outcomes. It is unclear whether this is because they are uncertain how to gather and analyze salient data that speaks to the achievement of project goals or because they lack the time and support necessary to accomplish this integral task. Unless the support provided by grant facilitators extends beyond services, resources, and formative and summative evaluations, it is unclear whether project goals have been met.

Methods - Phase I

Phase I included interviews, observations, and informal conversations with the grants' principle investigators, their designees, and other participants in organizing the implementation of the projects' activities. Data analysis included open coding of **all** transcripts by researchers to compare and discuss the findings and their meanings. As themes emerged from the data, researchers employed a constant comparative analysis method to determine data saturation (Merriam, 1998). The documents that each grant organization provided (data included survey responses, project curriculum and content materials, additional external evaluations, work samples, and promotional materials) were analyzed using document analysis techniques (Silverman, 1993). Communications with the grant teams were logged, and they included prompts for reporting status, collection of data, and offers of assistance with data analysis.

Methods - Phase II

Phase II included interviews with the grant investigators to find answers to research questions one and two. For research question three, the State Educational Technology Directors' Association (SETDA) was contacted. An invitation to participate in a survey was sent to this group of leaders from each state. These leaders represent those individuals most responsible for implementing the federal grants and the subsequent evaluation plans. These data were examined using descriptive statistics, and the qualitative answers were open coded and examined for emergent themes across the groups (Merriam, 1998; Miles & Huberman, 1994). Individual interview transcripts were also coded and examined for emergent themes. Finally, researchers disaggregated the data to determine if differences existed between the memberships' responses.

Results

Research question one, regarding the impact of these grants on rural schools' use of technology, is difficult to answer. In many cases participants reported little improvement in access or skills, and in others the reported changes were more positive. Unfortunately, based upon the data summaries submitted by each grant recipient, a number of questions and concerns arose. Without exception, grant facilitators were unable to align the goals of their individual projects with the data collected. Further, facilitators showed little evidence of an ability to link data trails in a manner that identified whether their respective projects had an impact on participants. While a perceived impact may hold some level of significance, it is important for grant directors to determine the *degree* of impact and to identify whether the project goals were met in explicit ways.

Research questions two and three resulted in information about the lack of support for these grants' implementation, lack of release time for grant investigators, and the lack of experience in collecting and analyzing data. Streamlining and narrowing the data collection process were suggested for each of the grant projects throughout the years of the projects. While groups demonstrated general attempts to streamline their data collection, based in part upon the discussions shared at earlier intervals through workshops and e-mail correspondence, project facilitators were unable to make substantive changes in their data collection methods.

Grant recipients are to be recognized for their attempts to gather data across groups, through multiple formats, and through measures occurring over time. However, it is not clear from the reports that the data collection process and actual content reflect direct linkages to project goals or whether other variables within individual contexts may have impacted the

outcomes reported. This may have more to do with lack of time rather than lack of knowledge or skill.

Finally, research question four produced results that this western state is not alone in its lack of clear and convincing evidence to support the impact of these federal funds. The data results are still evolving and we anticipate recommendations, experiences, and activities to improve this situation throughout the country.

Significance

In its inception, the focus of the State's Educational Technology Partnership Grants was to link two significant variables. Specifically, each grant was designed to integrate technology into school settings with the goal of enhancing the educational experiences of a range of students, particularly those from traditionally low academically achieving communities. In most instances, the report summaries submitted by each district fail to address these goals in substantive ways. That is, reports are often lacking in the degree to which data illustrate the ways in which technology integration is serving the target population of students and those working in their classrooms and schools. Instead, more generic findings and implications are shared (e.g., the development and integration of lesson plans), indicating that grant facilitators are collecting data and analyzing its content without the original goals of the grants in mind, and, in many cases, without any coherent guiding framework to inform their choice of data gathering methods.

The processes of data gathering and completing analyses are not simple ones. For teachers, administrators, and researchers, time, experience, and training are essential to effectively aligning project goals with methods of assessment and final analysis. A proposed solution is to

include an outside evaluator as a part of individual projects, but frequently the funding for block grants does not allow for this expense. The chain of accountability assumed by funding agencies depends heavily on an educational and legislative system sufficiently concerned with its resources to conscientiously evaluate their use. As one moves up the hierarchy of responsibility for the spending of taxpayer funds, this notion of accountability becomes increasingly complex, and is beyond the scope of this study. Our purposes are concerned with describing the deficiencies of a structure that overburdens those most closely connected with empowering students by using federal and state technology block grants. It is our hope that this description will inform a policy revision designed to enable districts and states to conduct discerning evaluations of their own programs and, in turn, to adapt fluidly to the dynamic technological environment into which they send their students.

References

- Archer, J. (2000). The link to higher scores. In *The Jossey-Bass Reader on Technology and Learning* (pp. 112-123). San Francisco: Jossey-Bass.
- Coppola, E. M. (2004). *Powering up: Learning to teach well with technology*. New York: Teachers College Press.
- Cullen, T., Frey, T., Hinshaw, R., & Warren, S. (2004). *Technology grants and rural grants: The power to transform*. Paper presented at the Annual Meeting of the Association for Educational Communications and Technology, Chicago, IL.
- Jensen, D. (1998). *Applications of technology in rural school facilities*. Paper presented at the international conference of rural school facilities, Kansas City, MO.
- Lunenberg, F. & Irby, B. (1998). Goals 2000 and integrated technology-A national status report: Preliminary results. Retrieved online, July 11, 2005, from:
http://www.eric.ed.gov/ERICWebPortal/Home.portal?_afn=1.
- Merriam, S. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Publishers.
- Pittman, R. (1993). The 21st century and secondary school at-risk students: What's ahead for teachers in rural America? In D. Montgomery, (Ed.), *Rural America: Where All Innovations Begin*. Conference Proceedings, Savannah, GA.
- Reeves, C. (2003). *Implementing the No Child Left Behind Act: Implications for rural schools and districts*. Education Policy Publications. Retrieved from
http://www.ncrel.org/policy/pubs/html/implicate/NCLB_PolicyBrief.pdf

RobJyer, M. D., & Knezek, G. (2003). New millennium research for educational technology: A call for a national research agenda. *Journal of Research on Technology in Education*, 36(1),60-71.

Silverman, D. (1993). *Interpreting qualitative data: Methods of analyzing talk, text, and interaction*. London: Sage Ltd.